2016 UDOT RESEARCH PROBLEM STATEMENT

****** Problem statement deadline is March 14, 2016. Submit statements to Tom Hales at tahales@utah.gov. ******

Title: Risk Assessment of Non-Motorized Access to Rail Transit Stations **No. (office use):** 16.03.10

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UDOT Champion (suggested): Robert Miles

Select One Subject Area

- ☐ Materials/Pavements
- ☐ Maintenance
- ☒ Traffic Mgmt/Safety
- ☐ Preconstruction
- ☐ Planning

1. Describe the problem to be addressed.

Pedestrian and bicycle safety has become an important priority area for UDOT over the past five years. The agency has undertaken multiple efforts to better understand the various components that contribute to safety for these vulnerable road users. This has included analysis of: characteristics of the built environment that make it safe or dangerous for pedestrians and cyclists; the detailed circumstances surrounding pedestrian fatalities; and pedestrian and cyclist crossing behaviors and an examination of how vehicles interact with these modes at intersection crossings. One major destination that attracts a large number of pedestrians and cyclists is transit stations. In fact all transit riders are pedestrians at some point in their journey, making it even more important to promote safe access to and from transit stations or stops. This travel is often overlooked by the DOT because it is typically classified as part of a transit trip. However, most transit riders access the stations and stops via UDOT roadways which puts a portion of pedestrian and cyclist transit access under UDOT's jurisdiction.

According to Congress for New Urbanism, "the Salt Lake City area has the fastest growth of rail transit comparing with any American city" (Eckerson, 2013). With this incredible growth comes a responsibility to understand and promote user safety. This research will build upon prior UDOT bicycle and pedestrian intersection safety research, as well as the UTA First and Last Mile Study to comprehensively analyze non-motorized safety in accessing fixed rail transit stations.

*Eckerson, C. (2013). Salt Lake City: A Red State Capital Builds Ambitious Transit. http://www.streetfilms.org/salt-lake-city-utah-a-conservative-state-builds-progressive-transit/

2. Explain why this research is important.

Although UDOT is not directly responsible for conditions at fixed rail stations, their jurisdiction does typically encompass rail crossings and roadways surrounding the rail stations. Because this infrastructure is used in accessing the stations it is important that it promotes safety, visibility, and ease of use. This research will specifically identify any geometric design or built-environment characteristics that may inadvertently be inhibiting pedestrian and cyclist safety in accessing or exiting the areas surrounding rail transit stations, focusing on Salt Lake County, UT.

3. List the research objective(s):

1. Analyze a comprehensive database of site characteristics within a set distance of rail transit stations in Salt Lake County, Utah.
2. Identify characteristics that are correlated to an increase or decrease in crash risk for pedestrians and cyclists.
3. Provide recommendations for improving safety.

4. List the major tasks:

1. Develop a project scope of work and cost estimate and identify appropriate TAC members.
2. Conduct a project kick-off meeting with the TAC.
3. Conduct a literature review of safety issues surrounding approximately 50 fixed rail transit stations in Salt Lake County.
4. Compile a comprehensive database of transportation system, and built/natural environment characteristics surrounding the fixed rail stations.
5. Analyze crash data surrounding each station and identify significant variables/characteristics.
6. Create recommendations for improving pedestrian and cyclist access in areas surrounding fixed rail transit stations.
7. Report results to UDOT in a final written report.

5. List the expected results:

1. Technical memo outlining the findings of the literature review.
2. Identification of significant hazards or impediments to pedestrian and cyclist safety in accessing transit stations.
3. Recommendations for infrastructure improvements surrounding rail transit stations.

6. Describe how this research will be implemented.

UDOT will be able to coordinate with UTA to address safety hazards near transit stations and along surrounding corridors in order to promote safety and reduce crash or accident risks. UDOT will provide guidance to local regions regarding site specific treatments or corridor/access improvements.

7. Requested from UDOT: $95,000 **Other/Matching Funds:** $ **Total Cost:** $95,000

8. Outline the proposed schedule, including start and major event dates.

Project will kick-off in Fall 2016. The comprehensive literature review will be conducted through the winter (Q4 2016-Q1 2017). A site inventory for each of the sample rail stations will be gathered from Q2-Q3 2017, and analysis will be conducted against crash and non-motorized incident data. Findings and recommendations will be compiled in the form of a final written report which will be submitted to UDOT and UTA. This research is anticipated to be completed within 12-15 months.